



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/712,365	11/14/2000	Edward B. Gindelc	81759RLO	9092

7590 08/28/2003

Thomas H. Close
Patent Legal Staff
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

[REDACTED] EXAMINER

DANG, DUY M

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

2621

DATE MAILED: 08/28/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/712,365	GINDELE ET AL.	
	Examiner	Art Unit	
	Duy M Dang	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 November 2000.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 November 2000 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Reuman (US Patent No. 6,069,982. Art of record, IDS filed 11/14/00, paper #2).

Regarding claim 1, Reuman teaches a method for estimating noise in digital image (see abstract), comprising:

- a) receiving a digital image (see col. 3 line 23);
- b) providing a first statistical table related to noise provided by an image source (see “gather user knowledge” shown at 6 in figure 1 and mentioned in col. 3 lines 27-29. Note the “noise characteristics” mentioned in cited portion corresponds to the so called “statistical table”. This interpretation is consistent with the Applicant’s disclosed page 2 lines 11-12);
- c) using the pixels of the digital image to calculate a second statistical table related to the noise provided by the image source in capturing the image (see “gather image data” shown at 8 in figure 1 and mentioned in col. 3 lines 29-31);
- d) using the first statistical table and the second statistical table to provide an updated third statistical table related to the noise provided by the image in capturing the image (see the combination of item 10 (i.e., generate image noise characteristics from user knowledge and

image data) and item 12 (i.e., update the selected default information) shown in figure 2 and the text portion mentioned in col. 3 lines 31-34); and

e)calculating a noise characteristic table from the third statistical table for use in enhancing the digital image (see col. 3 lines 7-9).

The advanced statement as applied to claim 1 above are incorporated herein. With regard to claim 13, Reuman further teaches a photographic image (see “image acquired from an digital image acquisition device” mentioned in col. 3 line 23 in together with “a digital still camera” mentioned in col. 5 41-42), a source identification tag corresponding to the photographic image capture source (see “spatial device profile tags” mentioned in col. 5 lines 17-18).

Regarding claims 2 and 14, Reuman further teaches wherein the first statistical table is either an initial default statistical table or an updated third statistical table (see col. 5 lines 34-37 and 50-60. Note the “selected spatial profile tags” (from box 6 in figure 1) before and after updated corresponds to so called default statistical table and update third statistical table).

Regarding claims 3 and 15, Reuman further teaches wherein the initial default statistical table relates to a noise estimate of that noise which will be provided by the image source in capturing the image (see col. 5 lines 39-47).

Regarding claims 4 and 16, Reuman further teaches a series of standard deviation values for different ranges of intensity provided by the capture image source (see “noise variance” mentioned in col. 5 lines 59-62).

Regarding claims 5 and 17, Reuman further teaches at least one histogram (see “histograms” shown at 27 in figure 2A).

Regarding claims 6 and 18, Reuman further teaches a series of histograms for different ranges of intensities provided by the captured image source (see col. 7 line 66 to col. 8 line 15).

Regarding claims 7 and 19, Reuman further teaches wherein the standard deviation values of the third statistical table are used in calculating the noise characteristics for enhancing the digital image (see col. 5 lines 59-61).

Regarding claims 8 and 20, Reuman further teaches wherein noise characteristic is used in processing the digital image for enhancing such digital image (see col. 3 lines 7-9).

Regarding claims 9 and 21, Reuman further teaches a spatial filter (see lowpass and highpass filters mentioned in col. 7 lines 25-35).

Regarding claims 10 and 22, Reuman further teaches using noise characteristic table and noise reduction filter to calculate an enhanced digital image (see col. 7 lines 28-31).

Regarding claims 11 and 23, Reuman further teaches using noise characteristic table and a sharpening filter to calculate an enhanced digital image (see col. 7 lines 31-34).

Regarding claims 12 and 24, Reuman further teaches using noise characteristic table, noise reduction filter, and a sharpening filter to calculate an enhanced digital image (see col. 7 lines 28-34 and figure 3C).

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hultgren et al. (US Patent No. 6,128,415) and Wober et al. (US Patent No. 5,729,631) are the examples of the field of invention.

Art Unit: 2621

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy M Dang whose telephone number is 703-305-1464. The examiner can normally be reached on Monday to Thursday from 6:30AM to 5:00PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H Boudreau can be reached on 703-305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

dmd
8/19/03



Duy M. Dang
Patent Examiner